

SWRCB Sensor Field Evaluation Workplan (Phase II) – July 3, 2001

Team Members

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Purpose of the Project

This project is intended to evaluate the functionality of liquid and vapor sensors used to monitor UST systems. The focus will be on “real world” effectiveness, with testing performed at operating facilities where the sensors are currently installed. The study is designed to:

- Evaluate the functionality of sensors used in California;
- Check the adequacy of field-testing procedures for sensors (or work with manufacturers to develop field-testing procedures if they are not already available);
- Determine if sensors in the field perform consistently with the specifications outlined in their third-party evaluations; and
- Determine if the third-party evaluation protocol currently used is suitable for each of the sensor types evaluated with that protocol.

Coordinating Field Efforts

In order for us to test at a UST facility, several people must be present or notified. At a minimum, this will include SWRCB staff and a service technician on site, as well as notification of the facility owner/operator. Additionally, local agency inspectors and sensor manufacturers may be present. We plan to work with local agencies and maintenance contractors to coincide our testing with the required annual maintenance inspections already scheduled at the facilities

Data Collection Process

- ***Field Testing Method*** – Experienced service technicians will conduct the testing. They will access sensors in sumps, tank interstice, dispenser pans, excavation linings, and monitoring wells. The sensors will be immersed in water at a depth corresponding to their third-party evaluation. In addition, discriminating sensors will be tested in fuel and/or a fuel/water mixture.
- ***Data Recording*** – Our staff will observe the testing and record data. We will record sensor response and recovery time, as well as information about the sensor make, model, and application. Additionally, we will record data about the facility and the condition of the area the sensor is located in. Through careful collection and analysis of data, we hope to determine what factors may adversely effect sensor performance.
- ***Industry Professional’s Survey*** - In addition to the data collected from field-testing, we will survey experienced maintenance technicians and inspectors. Their responses will be used to supplement our field data and give us a clearer picture of sensor effectiveness.

Safety Considerations

Qualified contractors will perform all hands-on testing. They have been trained to safely deal with the equipment and hazardous substances found at the facilities where our testing will take place. Our staff will only observe and record data, but all applicable standards of safety will be adhered to. This includes, but is not limited to, proper securing of the work area from traffic hazards.

Final Report/Summary

A thorough report will be completed at the end of field-testing. It will detail our testing activities and present the data collected from both the tests and completed surveys. In addition, the report will state conclusions and recommendations based on the results of our study.